

REMARKS/ARGUMENTS

Claims 1-7 are pending in this application. Claim 1 has been amended to more clearly recite applicants' invention. The amendments to the claim are completely supported by the application as originally filed and thus they raise no issue of new matter. In particular, support for the recitation of the Markush Group of biologically active substances is found on p. 2, lines 17-18 and page 4, lines 10-11. Support for the recitation that the substance is included as a dispersed powder in the paint binder is found at p. 2, lines 17-20. Additionally, support for the negative limitation, i.e., that the paint is substantially free of metal compounds used for controlling at least one of the tendency and the ability of marine creatures to fasten to a surface of the paint, is found at p. 1, lines 19-21 which teach that such metal compounds are generally unacceptable from an environmental aspect and p. 1, lines 23-26 which teach that the paint of the invention contains an environmentally acceptable substance that is effective in making it difficult for marine organisms to fasten to the water-exposed paint layer. As amended, the claim is believed to completely distinguish the invention over the prior art.

A minor, formal amendment has been made to claim 2 wherein, "the said" has been changed to simply "said". In addition, "the surface" of said paint has been changed to "a surface" pursuant to a rejection based on a lack of antecedent basis for the original language. No new matter is added by this amendment.

Claim 6 has been amended to change its dependency from claim 5, now canceled, to claim 1. No new matter is added.

Claims 3, 4, 5 and 7 have been cancelled without prejudice or disclaimer of applicants' right to pursue patent protection for the subject matter of those claims in a subsequently filed application, due to the amendment of claim 1.

In addition to the above-described claim amendments, the specification has been amended throughout to remove the references contained therein to the claims of the application. No new matter is added by these amendments.

Entry of this Amendment is, therefore, respectfully requested as it is believed to place the entire application in condition for allowance. Upon such entry, claims 1, 2 and 6, as amended, will remain pending in the application for the Examiner's consideration.

Objections to the Specification

The Examiner objects to applicants' specification due to the references contained therein to the claims of the application. In response thereto, applicants have amended the specification, as described above, to remove the references to the claims.

The Examiner is, therefore, respectfully requested to reconsider and withdraw his objection(s) to the specification.

Claim Rejections Under 35 U.S.C. §112

A. Rejections Under Paragraph 1 of §112

Claims 1-7 are rejected under 35 U.S.C. §112, first paragraph. According to the Office Action, the specification enables the use of certain biologically active substances (as taught therein) but it does not enable the use of every biologically active substance known to man. This ground of rejection is respectfully traversed.

In response to the rejection, applicants have amended claim 5 to recite a Markush Group including certain specific biologically active substances. This amendment is believed to overcome the rejections under paragraph 1 of 35 U.S.C. §112 and the Examiner is, thus, respectfully requested to reconsider and withdraw these rejections.

B. Rejections Under Paragraph 2 of §112

Claims 1-7 are additionally rejected under 35 U.S.C. §112, second paragraph. These rejections are also respectfully traversed.

The Examiner states in the Office Action that it is not clear whether the phrase, "self-polishing" refers to both the term "antifouling" and the phrase, "boat bottom". Claim 1 has thus been amended to delete the term "boat bottom" from the preamble. This, of course, does not alter the fact that one of the preferred (but not the only) uses of the subject paint is as a "boat-bottom paint". The claim amendment is believed to overcome the rejection.

The Examiner states further that the phrase, "in the presence of water" in claim 1 is vague and indefinite as the meaning is unclear to him. Applicants have, therefore, amended claim 1 to change "in the presence of water" to "upon contact with water". No new matter is added by the amendment. The amendment is believed to overcome the above ground for rejection as well.

The Examiner additionally states that the phrase, “the water exposed paint layer” lacks a proper antecedent basis. In response, applicants have amended the subject phrase so that the claim now recites, “. . . in the paint upon said contact with said water”. This amendment is believed to overcome the above additional ground for rejection by the Examiner which should therefore be withdrawn.

In claim 2, “the surface” is objected to due to a lack of a proper antecedent basis. In response, “the surface” has been amended to “a surface”. No new matter is added by this amendment, which is believed to overcome the ground for rejection of the subject claim. The rejection should thus be withdrawn.

Claim 3 is rejected due to the presence of the phrase, “includes a material or [*sic.* of] biological origination”. The cancellation of claim 3, however, without prejudice or disclaimer, renders the rejection moot.

Further according to the Office Action, the phrase, “the paint composition” in claim 5 lacks a proper antecedent basis. The cancellation of claim 5, however, without prejudice or disclaimer, renders the rejection moot.

The claim amendments and cancellations described above are believed to overcome all of the Examiner’s grounds for rejection under 35 U.S.C. §112, second paragraph, which should, therefore be withdrawn.

Claim Rejections Under 35 U.S.C. §102

Claims 1 and 5 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by PCT International Application No. WO 00/77102 for the reasons on p. 4 of the Office Action. The rejection is respectfully traversed.

In response to the rejection, the Examiner’s attention is respectfully directed to the examples of the biologically active agents useful in the invention of the WO 00/77102 reference which are described at pps. 24-26 (see, esp. p. 25, lines 5-10). As the Examiner will note, the reference teaches to use as the subject agents, *inter alia*, a variety of metal compounds, including compounds containing zinc, copper, copper metal alloys and other metal salts. In contrast, applicants’ claim 1 as presently amended now recites that the paint of the invention is substantially free of such metal compounds. Thus, applicants’ invention involves the exclusion of

metal compounds used for controlling at least one of the tendency and the ability of marine creatures to fasten to a surface of the paint (e.g., copper oxide or tin salts, or TBT according to p. 1 of the specification) as biologically active substances, whereas in the cited reference these materials are preferred for use as such biologically active substances. Not only, therefore, does the reference not disclose applicants' invention as now claimed, it also would not suggest the presently claimed paint to one of ordinary skill in this art.

The Examiner is respectfully requested to reconsider and withdraw the rejection of applicants' claims under §102 over WO 00/77102.

Claims 1 and 5 are also rejected under 35 U.S.C. §102(b) as allegedly being anticipated by PCT International Application No. WO 00/77103 for the reasons given on pp. 4-5 of the Office Action. This rejection is also respectfully traversed.

As in the case of the WO 00/77102 reference discussed above, the examples of the biologically active agents set forth on pps. 31-33 include a variety of metal compounds, such as organometals and metal biocides. As such, the presently claimed invention is believed to be distinguishable over WO 00/77103 for the same reason(s) as WO 00/77102. The Examiner is, therefore, respectfully requested to reconsider and withdraw the §102(b) rejection based on WO 00/77103.

Claims 1 and 5 are additionally are rejected for anticipation under 35 U.S.C. §102(b) over PCT International Application No. WO 01/94479 for the reasons set forth on p. 5 of the Office Action. This rejection, too, is respectfully traversed.

As in the case of the two references discussed above, the WO 00/94479 reference provides numerous examples of biologically active agents useful with the invention described therein (see, e.g., pps. 25-27 of the reference) wherein the agents include a variety of metallic compounds, including organometals and metal biocides (see, e.g., p. 25). As these materials are specifically excluded from applicants' claimed compositions by the language of claim 1, it is submitted that the subject reference does not teach or even suggest applicants' invention. The Examiner is, therefore, respectfully requested to reconsider and withdraw the subject rejection based on WO 00/94479.

Claims 1 and 3-4 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by European Patent Application No. 244688 A2 for the reasons given on p. 5 of the Office Action.

The subject rejection is respectfully traversed.

The Examiner points, in particular, to the disclosure contained in the cited reference at page 14, lines 8 *et seq.*, to a composition comprising a bioadhesive polyphenolic protein and a muscle adjuvant protein for use as an anti-fouling coating. As now amended, however, claim 1 recites that applicants' claimed composition comprises, *inter alia* : (a) a binder; and (b) a biologically active substance, wherein the biologically active substance is selected from the group consisting of (1) a powdered vegetable material such as soy flour, as well as (2) fishmeal, (3) egg powder, (4) ground sea kelp and (4) combinations of the above-described materials. These materials are nowhere taught, or even suggested by the cited reference for use as the biologically active substance in a self-polishing, anti-fouling paint. Thus, applicants respectfully request that the Examiner reconsider and withdraw the §102 rejection based on EP Application No. 244688 A2.

Claims 1 and 3-4 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by German Patent Specification No. 198 36 076 A1 for the reasons given on p. 6 of the Office Action. The subject reference is in the German language but an English-language abstract has been provided. The rejection is respectfully traversed.

The Office Action states that according to the abstract, the reference teaches an antifouling coating composition comprising a degradable gel matrix and a proteinaceous gel-former, wherein the gel-former consists of two different proteins. As indicated above in the discussion of EP Application No. 244688 A2, however, as now amended, claim 1 recites that applicants' claimed composition comprises, *inter alia* : (a) a binder; and (b) a biologically active substance, wherein the biologically active substance is selected from the group consisting of (1) a powdered vegetable material such as soy flour, as well as (2) fishmeal, (3) egg powder, (4) ground sea kelp and (4) combinations of the above-described materials. These materials are nowhere taught, or even suggested by the cited reference for use as the biologically active substance in a self-polishing, anti-fouling paint. Thus, applicants respectfully request that the Examiner reconsider and withdraw the §102 rejection based on German Patent Specification No. 198 36 076 A1.

Claims 1 and 3 are rejected under §102(b) as allegedly anticipated by U.S. Patent No. 5,770,188 to Hamade et al. for the reasons given on p. 6 of the Office Action. This rejection is

respectfully traversed.

According to the Office Action, the subject reference teaches, in the examples and the claims, an antifouling paint composition comprising a lipid coated enzyme and a paint resin. In contrast, however, claim 1 as now amended recites that applicants' composition comprises, *inter alia*: (a) a binder; and (b) a biologically active substance, wherein the biologically active substance is selected from the group consisting of (1) a powdered vegetable material such as soy flour, as well as (2) fishmeal, (3) egg powder, (4) ground sea kelp and (4) combinations of the above-described materials. These materials are nowhere taught, or even suggested by the cited reference for use as the biologically active substance in a self-polishing, anti-fouling paint. Thus, applicants respectfully request that the Examiner reconsider and withdraw the §102 rejection based on U.S. Patent No. 5,770,188 to Hamade et al.

Per the discussions above, therefore, concerning the various features which distinguish applicants' invention from the disclosure of the references upon which the anticipation rejections are based, the Examiner is respectfully requested to reconsider and withdraw all of the §102 rejections of applicants' claims.

Claim Rejections Under 35 U.S.C. §103

Claims 1 and 3-5 are rejected under 35 U.S.C. §103(a) as allegedly unpatentable for 'obviousness' over European Patent Specification No. 0 869 159 A1 for the reasons on p. 7 of the Office Action. This rejection is respectfully traversed.

According to the Office Action, the (original) claims of this application are 'obvious' over the disclosure by the cited reference of a paint formulation comprising "a binder", "a solvent", "proteinaceous material", etc.

Notwithstanding whether or not applicants' original claims would have been obvious over the disclosure contained in the subject reference, as indicated above, *inter alia*, claim 1 of the application has been amended to more clearly recite the features of applicants' invention and to further distinguish the invention over the prior art references cited by the Examiner. That is, claim 1 as now amended recites that applicants' composition comprises: (a) a binder; and (b) a biologically active substance, wherein the biologically active substance is selected from the group consisting of (1) a powdered vegetable material such as soy flour, as well as (2) fishmeal,

(3) egg powder, (4) ground sea kelp and (4) combinations of the above-described materials. These materials are nowhere taught, or even suggested by the cited reference for use as the biologically active substance in a self-polishing, anti-fouling paint, although the use of “soy protein” is mentioned on p. 2, lines 35-38. As recited, however, in claim 1 the, *inter alia*, soy powder is dispersed in the paint binder. Such ‘powder’ is not at all taught for use in the cited reference. Thus, applicants respectfully request that the Examiner reconsider and withdraw the §103 rejection based on European Patent Specification No. 0 869 159 A1.

Claim 2 is rejected for “obviousness” under 35 U.S.C. §103(a) over PCT International Applications WO 00/77102; WO 00/77103 ; and WO 01/94479 for the reasons on p. 8 of the Office Action. These rejections are also respectfully traversed.

The Office Action states, with regard to the rejections based on the subject references, that applicants teach in their specification that photosynthesis inhibitors are known to be compatible with self-polishing antifouling paints. The Examiner concludes, therefore, that one of ordinary skill in the art would have found it obvious to incorporate a photosynthesis inhibitor into the self-polishing antifouling paints of the references without producing any unexpected results and thus arrive at the instant invention.

In response to these rejections, however, applicants note that claim 2 depends from claim 1 and thus the subject claim includes all of the recitations contained in claim 1 (as now amended). Applications WO 00/77102, WO 00/77103 and WO 01/94479 are each discussed and distinguished above in the portion of this Amendment dealing with the rejections based on 35 U.S.C. §102. As pointed out therein, claim 1 as now amended recites that applicants’ composition comprises, *inter alia* : (a) a binder; and (b) a biologically active substance, wherein the biologically active substance is selected from the group consisting of (1) a powdered vegetable material such as soy flour, as well as (2) fishmeal, (3) egg powder, (4) ground sea kelp and (4) combinations of the above-described materials. These materials are nowhere taught, or even suggested by the cited reference for use as the biologically active substance in a self-polishing, anti-fouling paint. Thus, the inclusion of the photosynthesis inhibitor recited in claim 1 only serves to even further distinguish the invention over the cited International Publications which also do not mention this claimed feature of the invention. Thus, applicants respectfully request that the Examiner reconsider and withdraw the §103 rejection of claim 2 based on the

three above-cited International Publications.

References Cited By The Examiner

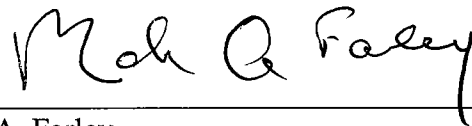
Applicants acknowledge the Examiner's statement at p. 8 of the Office Action that the remaining references cited have been reviewed by the Examiner and are considered to be cumulative or less material than the prior art references relied upon in the rejections raised in the Office Action.

Summary

Based on the claim amendments and arguments presented above, applicants respectfully submit they believe that all of the grounds for objection/rejection of their application, as set forth in the Office Action, have been overcome. If the Examiner believes that an interview would advance the prosecution of this case, he is respectfully invited to telephone applicants' representative at the number below and an interview will thus be arranged.

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Respectfully submitted,



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